

CLAIMS

WHAT IS CLAIMED IS: WHAT IS CLAIMED IS:

1. An expandable downhole anchoring tool positionable within a wellbore for use in cooperation with drilling equipment comprising:

a body including a plurality of angled channels formed into a wall of said body; and
a plurality of moveable slips, wherein said plurality of moveable slips translates along said plurality of angled channels between a collapsed position and an expanded position.

2. The tool of claim 1 wherein said plurality of slips includes a plurality of extensions corresponding to and engaging said plurality of channels.

3. The tool of claim 1 wherein said extensions and said channels comprise a drive mechanism for moving said plurality of slips between said collapsed position and said expanded position.

4. The tool of claim 1 wherein said extensions and said channels support loading on said plurality of slips in said expanded position.

5. The tool of claim 1 wherein said plurality of slips comprises at least one pair of slips spaced apart circumferentially around said tool body.

6. The tool of claim 1 wherein said plurality of slips comprises a first pair of slips spaced apart circumferentially and a second pair of slips spaced circumferentially around said tool body, wherein said first pair of slips are offset about 90° from said second pair of slips.

7. The tool of claim 1 wherein said plurality of slips includes angled surfaces for collapsing said slips into said body.

8. The tool of claim 1 and an axial flowbore extends through said body.
9. The tool of claim 1 further including a piston that translates said plurality of slips from said collapsed position to said expanded position.
10. The tool of claim 1 wherein said plurality of slips grippingly engage said wellbore in said expanded position.
11. The tool of claim 1 wherein said plurality of slips are adapted to grippingly engage the wellbore.
12. The tool of claim 11 wherein each of said plurality of slips include at least one carbide insert for grippingly engaging said wellbore in said expanded position.
13. The tool of claim 11 wherein said plurality of slips includes a plurality of threads radially and axially aligned to resist axial and torsional forces for grippingly engaging said wellbore in said expanded position.
14. The tool of claim 1 further including a locking means for preventing said plurality of slips from translating between said expanded position and said collapsed position.
15. The tool of claim 1 further including a releasing means for allowing said plurality of slips from translating between said expanded position and said collapsed position.
16. An expandable downhole anchoring tool positionable within a wellbore for use in cooperation with drilling equipment comprising:
 - a mandrel;
 - at least one slip housing having a plurality of angled channels; and

at least one pair of individual slips that translates along said angled channels between a collapsed position and an expanded position, wherein said individual slips include a cavity for matingly engaging said mandrel while in said collapsed position.

17. The tool of claim 16 wherein said at least one pair of slips includes a plurality of extensions corresponding to and engaging said plurality of channels.

18. The tool of claim 16 wherein said extensions and said channels comprise a drive mechanism for moving said at least one pair of slips between said collapsed position and said expanded position.

19. The tool of claim 16 wherein said extensions and said channels support loading on said at least one pair of slips in said expanded position.

20. The tool of claim 16 wherein said at least one pair of slips comprises at least one pair of slips spaced apart circumferentially around said tool body.

21. The tool of claim 16 wherein said at least one pair of slips comprises a first pair of slips spaced apart circumferentially and a second pair of slips spaced circumferentially around said tool body, wherein said first pair of slips are offset about 90° from said second pair of slips.

22. The tool of claim 16 wherein said at least one pair of slips includes angled surfaces for collapsing said slips into said body.

23. The tool of claim 16 and an axial flowbore extends through said mandrel.

24. The tool of claim 16 further including a piston that translates said at least one pair of slips from said collapsed position to said expanded position.

25. The tool of claim 16 wherein said at least one pair of slips grippingly engages said wellbore in said expanded position.
26. The tool of claim 16 wherein said at least one pair of slips are adapted to grippingly engage the wellbore.
27. The tool of claim 26 wherein said slips comprise at least one carbide insert for grippingly engaging said wellbore in said expanded position.
28. The tool of claim 26 wherein said at least one pair of slips includes a plurality of threads radially and axially aligned to resist axial and torsional forces for grippingly engaging said wellbore in said expanded position.
29. The tool of claim 16 further including a locking means for preventing said at least one pair of slips from translating between said expanded position and said collapsed position.
30. The tool of claim 16 further including a releasing means for allowing said plurality of slips from translating between said expanded position and said collapsed position.